

Certification Record

Customer	Class	File Number
Schneider Electric USA, Inc. Square D Raleigh (Knightdale) Plant, 8001 Knightdale Blvd Knightdale NC USA 27545	<u>3211-04</u> INDUSTRIAL CONTROL EQUIPMENT-Motor Controllers - Magnetic	060905_S_000

- AC starters: Class 8536 non-reversing, Class 8736 reversing, Class 8810 two speed; and
AC Contactors: Class 8502 non-reversing, Class 8702, reversing:
 - Size 00, across-the-line, magnetically operated, rated 10 Amax (open) or 9 Amax (enclosed), single phase: 1/3hp, 115V; 1hp, 230V; three-phase: 1.5hp, 200V; 1.5hp, 230V; 1.5hp, 380V; 2hp, 575V, three phase. Standard fault short-circuit withstand rating: 5kA RMS sym.– 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
 - Size 0, across-the-line, magnetically operated, rated 20 Amax (open) or 18 Amax (enclosed), single phase: 1hp, 115V; 2hp, 230V; three-phase: 3hp, 200V; 3hp, 230V; 5hp, 380V; 5hp, 575V, three phase.
Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
 - Size 1, across-the-line, magnetically operated, rated 30 Amax (open) or 27 Amax (enclosed), single phase: 2hp, 115V; 3hp, 230V; three-phase: 7.5hp, 200V; 7.5hp, 230V; 10hp, 380V; 10hp, 575V, three phase. Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
 - Size 1P, across-the-line, magnetically operated, rated 36 Amax (open) or 30 Amax (enclosed), single phase: 3hp, 115V; 5hp, 230V.
Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
 - Size 2, across-the-line, magnetically operated, open type, rated 45A (max), 3 hp, 115V and 7.5 hp, 230V, single phase, 10 hp, 200V, 15 hp, 230V, 25 hp, 380V, 25 hp, 575V, three phase.
Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
 - Size 3, across-the-line, magnetically operated, open type, rated 90A (max), 7.5 hp, 115V; 15 hp, 230V single phase; 25 hp, 200V; 30 hp, 230V; 50 hp, 380V; 50 hp, 575V, three phase.
Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
 - Size 4, across-the- line, magnetically operated, open type, rated 135A (max), 40 hp 200V, 50 hp 230V, 75 hp 380V, 100 hp 575V, three phase.
Standard fault short-circuit withstand rating: 10kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
 - Size 5, across-the-Line, magnetically operated, open type, rated 270A (max), 75 hp, 200V; 100 hp, 230V; 150 hp, 380V; 200 hp, 575V, three phase.
Standard fault short-circuit withstand rating: 10kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
 - Size 6, across-the-line, magnetically operated, open type, rated 540A (max), 150 hp, 200V, 200 hp, 230V, 300 hp, 380V, 400 hp, 575V, three phase.
Standard fault short-circuit withstand rating: 18kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
- AC Contactors: Class 8502, Type REQ-2617-G1, non-reversing, across-the line, magnetically operated, open type, rated 20 hp, 230V, 30 hp, 460V, three phase.
Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
- AC Contactors: Class 8502, Type REQ-2686-G1, non-reversing, across-the-line, magnetically operated, open-type, rated 40 hp, 230V; 75 hp, 460V, three phase.
Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
- AC starters: Class 8536 non-reversing, Class 8736 reversing, Class 8810 two speed; and
AC Contactors : Class 8502 non-reversing, Class 8702, reversing:
 - Size 7, across-the-line, magnetically operated, open type, rated 750A (max), 250 hp, 200V, 300 hp, 230V, 450 hp, 380V, 600 hp, 575V, three phase.

- Class 8502 contactors, Types PG, PJ and PK (with suffixes), Series A and B, open or enclosed types, 3-pole, may be provided with auxiliary contacts, coils 24-600V ac, 50/60Hz, for max contact ratings see Table 1.

Table 1:

Horsepower

Type	Current (A)	3-phase		
		200-230V	460V	575V
PG1	80	20	40	50
PG3	100	25	50	60
PJ1	125	30	60	75
PJ3	160	40	75	100
PJ5	160	50	100	125
PK1	200	60	125	150
PK3	250	75	150	200
PK5	315	100	200	250

- Class 8702, reversing contactors, open or enclosed, Sizes 00 to 6.
- Class 8702, reversing contactors, open or enclosed, Size 7.
AC across-the-line contactors and starters for crane and hoist application, max ratings as follows:

Designation	Type	Size	No of Poles	Amps	230V	460V
Contactors						
U-11454-03	Non-Rev.	0	3	20	3	5
U-11454-13	"	1	"	30	7-1/2	10

U-11454-23	"	2	"	67	20	40
U-12399-12	"	1	2	30	3	-
U-12399-22	"	2	"	67	7-1/2	-
U-11451-03	Reversing	0	3	20	3	5
U-11451-13	"	1	"	30	7-1/2	10
U-11451-23	"	2	"	67	20	40

Starters

U-11452-03	Reversing	0	3	20	3	5
U-11452-13	"	1	"	30	7-1/2	10

2-pole devices are single phase; 3-pole devices are three-phase.

- Class 8965, reversing contactors, Type R, open type, rated 1 hp, 100-115V, 1-1/2 hp, 220-230V, single-phase, 2 hp, 110-115V, 3 hp, 220-480V, 2- or 3-phase.
- Class 8965, 8 (two unwired, 3 pole mech. interlocked contactors), Type R, Series A or D, open type, rated 3 hp, 600V max, 3 ph. AC contactor and starter ratings include the following (maximums):

Horsepower

Starter or Contactor Size	Amps (Open)	Single-Phase		Three-Phase			
		115V	230V	200V	230V	380V	575V
00	9	1/3	1	1-1/2	1-1/2	1-1/2	2
0	18	1	2	3	3	5	5
1	27	2	3	7-1/2	7-1/2	10	10
1P	30	3	5	-	-	-	-
2	45	3	7-1/2	10	15	25	25
3	90	7- 1/2	15	25	30	50	50
4	135	-	-	40	50	75	100
5	270	-	-	75	100	150	200
6	540	-	-	150	200	300	400
7	750	-	-	250	300	450	600

Medium voltage contactors (ac).

- Class 8944, Type MVO-7, 1000/1200/1500V, 100 FLA, 800/700/560 LRA; Type MVO-8, 1000/1200/1500V, 150 FLA, 1200/1120/900 LRA; Min. P.F. 30 percent (1200V max), 45 percent (1500V max).
- Contactors Class 8910, open, single phase, Type DP12..S5, 115V ac, 1 hp, 230V ac, 2 hp; Type DP22..S5, 115V ac, 2 hp, 230V ac, 3 hp; Type DP32..S5, 115V ac, 2 hp, 230V ac, 5 hp.

Note: Open type units are CSA Certified for use only as components of other equipment where the acceptability of the combination has been determined by CSA International.

- Contactors, open, Series DPA 122, DPA 123, rated as follows:

Horsepower

Type	Phase	Poles	115V	230V	460V	575V
DPA122	1	2	10	25	-	-
DPA123	1	3	10	25	-	-
	3	3	-	40	75	75

Notes:

1. Contactors and Starters, Sizes 0 to 6, Classes 8502, 8536, 8702, 8736, 8810, 8903, 2510, 2511 and 2512 may be provided with Class 9999 kits as follows: Type SX Series auxiliary contacts, rated A600.
2. These contactors are Certified as components for use only in other Certified equipment where the suitability of the combination is determined by CSA International.
3. Class 8536, 8736, 8810, 8502, 8702 devices may be provided in special purpose enclosures, CSA Types 1, 3R, 4, 4X or 12.

- Class 8536, Type W (with suffixes), vacuum starters, open type, Sizes 4 to 6, 400 hp max, 575V ac max, 3 ph. Electrical ratings are as follows:

HP Rating

Type	200V	230V	460V	575V
WF03	40	50	100	100
WG03	75	100	200	200
WH03	150	200	400	400

Note: Open type devices are Certified as components for use only in other Certified equipment where the suitability of the combination has been determined by CSA International.

- Across-the-line motor controllers, enclosed, Cat Nos LE1U and LESU(non-reversing) and Cat No LE2U (reversing), 60 hp max, max, 600V ac max and Cat No LE1D, 40 hp max, 600V ac max. Auxiliary contact rated A600, P600. Coils rated 24-600V ac, 50 to 60Hz. Main contact ratings are as follows:

Maximum Horsepower

Installed Contactor	LESU and LE1U Controller 1 ph		LE1U and LE2U Controller 3 ph			
	115V	230V	200V	230V	460V	575V
LC1 or LC2						
D09 - D09	0.5	1	2	2	5	7.5
D12 - D12	1	2	3	3	7.5	10
D18 - D18	1	3	5	5	10	15
D25 - D25	1.5	3	5	7.5	15	20
D32 - D32	2	5	7.5	10	20	25
D40 - D40	3	5	10	10	30	30
D50 - D50	3	7.5	10	15	30	40
D65 - D65	5	10	15	20	40	50
D80 - D80	5	10	20	20	50	60

- Across-the-line motor controllers, combination starters, Cat No LE1U (non-reversing) and Cat No LE2U (reversing), 60 hp max, max, 600V ac max. Auxiliary contact rated A600, P600. Coils rated 24-600V ac, 50 to 60Hz.
- Combination starters with instantaneous trip circuit breakers, enclosed in CSA Type 3R enclosures, Cat No 8539MESU and 8539ME1U (with suffixes), 10 hp max, 600V ac max. Auxiliary contacts rated A600, P600. Coils rated 120-600V ac, 60Hz.
- AC Contactor, Cat. No. 8502REQ3537G3, Size 2, non-reversing, across-the-line, magnetically operated, open type, rated 45A (max), 3 hp, 115V and 7.5 hp, 230V, single phase, 10 hp, 200V, 15 hp, 230V, 25 hp, 380V, 25 hp, 575V, three phase. Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
- AC Starter, Cat. No. 8536REQ3537G6, Size 2, non-reversing, across-the-line, magnetically operated, open type, rated 45A (max), 3 hp, 115V and 7.5 hp, 230V, single phase, 10 hp, 200V, 15 hp, 230V, 25 hp, 380V, 25 hp, 575V, three phase. Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
- AC Contactor, Cat. No. 8502REQ3537G8, Size 3, non-reversing, across-the-line, magnetically operated, open type, rated 90A (max), 7.5 hp, 115V; 15 hp, 230V single phase; 25 hp, 200V; 30 hp, 230V; 50 hp, 380V; 50 hp, 575V three phase. Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym.
- AC starter, Cat. No. 8536REQ3537G4, Size 3, non-reversing, across-the-line, magnetically operated, open type, rated 90A (max), 7.5 hp, 115V; 15 hp, 230V single phase; 25 hp, 200V; 30 hp, 230V; 50 hp, 380V; 50 hp, 575V three phase. Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.
- AC starter, Cat. No. 8736REQ3537G7, Size 3, reversing, across-the-line, magnetically operated, open type, rated 90A (max), 7.5 hp, 115V; 15 hp, 230V single phase; 25 hp, 200V; 30 hp, 230V; 50 hp, 380V; 50 hp, 575V three phase. Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max.

- AC Starters: Class 8536, non-reversing, open type and general purpose enclosed; Class 8736, reversing, open type; Class 8810, two speed, open type; and
- AC Contactors: Class 8502, non-reversing, open type and general purpose enclosed; Class 8702, reversing, open type;
- Sizes 00, 0, 1 and 1P, across-the-line, magnetically operated, rated:

Starter Size	Current (A)		Horsepower							Short circuit (kA RMS sym.)		
	Open	Enclosed	Single-Phase		Three-Phase				Standard fault*	High fault*		
			115V	230V	200V	230V	380V	575V		480V	600V	
00	10	9	1/3	1	1.5	1.5	1.5	2	5	100	100	
0	20	18	1	2	3	3	5	5	5	100	100	
1	30	27	2	3	7.5	7.5	10	10	5	100	100	
1P	36	30	3	5	-	-	-	-	5	100	100	

* See note 3 for application details.

AC Contactors: Class 8502, open or enclosed, Type REQ-2616-G1, 3-phase, Ratings: 10 hp, 230V, 15 hp, 460V.
Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max (See note 3 for application details).

AC Contactor, Cat. No. 8502REQ3537G1, Size 1, non-reversing, across-the-line, magnetically operated, open type, rated 30A max, single phase, 2 hp, 115V and 3 hp, 230V; three phase, 7.5 hp, 200V, 7.5 hp, 230V, 10 hp, 380V, 10 hp, 575V.
Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max (See note 3 for application details).

AC Starter, Cat. No. 8536REQ3537G5, Size 1, non-reversing, across-the-line, magnetically operated, open type, rated 30A max, single phase, 2 hp, 115V and 3 hp, 230V; three phase, 7.5 hp, 200V, 7.5 hp, 230V, 10 hp, 380V, 10 hp, 575V.
Standard fault short-circuit withstand rating: 5kA RMS sym. – 600Vac; High fault short-circuit withstand rating: 100kA RMS sym. – 600Vac max (See note 3 for application details).

Notes:

1. Type designation are suffixed with letters and/or numbers to denote type of enclosure “O” for open, “G” for general purpose enclosed, contact arrangement, etc.
2. Open type units are CSA Certified for use only as components of other equipment where the acceptability of the combination has been determined by CSA Group.
3. Class 8502 and 8702 contactors: These devices are suitable for use on a circuit capable of delivering not more than 100,000rms symmetrical A, 600 V~ maximum, when protected by Class RK5, RK1, T or J fuses with a maximum rating of 60 A; 480 V~ maximum, when protected by a circuit breaker with a maximum rating of 70 A. For a circuit capable of delivering more than 5,000 rms symmetrical A the minimum enclosure volume is 300 cu in. The equipment enclosure must have a minimum of four fastening points or a piano hinge and two fastening points.
4. Class 8536 and Class 8736 devices of the E Series and class 8810 of A series shipped with a Tesys D class 10 or 20 overload relay, in such cases, these starters have the following characteristics:
Optional high fault ratings:
Maximum 65kA RMS at 480V when protected by thermal magnetic circuit breaker rated not more than shown in the table below.
Maximum 100kA RMS at 600V when protected by class CC or class J fuses rated not more than shown in the table below.
For a circuit capable of delivering more than 5,000 rms symmetrical A, the minimum enclosure volume is 480 cu in. and the enclosure must have a minimum of four fastening points or a piano hinge and two fastening points.

Overload Relay Catalog Number	Max. Circuit Breaker Ampacity	Max. Class J or CC Fuse Ampacity
LRD03–LRD07, LR3D03–LR3D07	15	10

LRD04L–LRD07L, LR3D04L–LR3D07L		
LRD08, LR3D08, LRD08L, LR3D08L	15	15
LRD10, LR3D10, LRD10L, LR3D10L	15	20
LRD12, LR3D12, LRD12L, LR3D12L	15	30
LRD14, LR3D14, LRD14L, LR3D14L	20	40
LRD16, LR3D16, LRD16L, LR3D16L	25	50
LRD21, LR3D21, LRD21L, LR3D21L	35	60
LRD22, LR3D22, LRD22L, LR3D22L	45	60
LRD32, LR3D32, LRD32L, LR3D32L	60	60

5. Short Circuit Ratings for Units with Tesys D Solid State Overloads:

The starter is suitable for use on a circuit capable of delivering not more than 5,000 rms symmetrical A, 600 V~ maximum, when protected by branch-circuit overcurrent protection in accordance with the Canadian Electrical Code (CEC).

The starter is also suitable for use on a circuit capable of delivering not more than 100,000 rms symmetrical Amps; at 600 V~ maximum when protected by a Class J or CC fuse rated not more than shown in the table below. The starters are also rated for the rms symmetrical short-circuit current in amps shown below at 480 V~ maximum when protected by thermal-magnetic circuit breakers rated not more than shown in the table below.

For a circuit capable of delivering more than 5,000 rms symmetrical A, the minimum enclosure volume is 480 cu in. and the enclosure must have a minimum of four fastening points or a piano hinge and two fastening points.

Overload Relay Catalog Number	Max. Circuit Breaker Ampacity (A)	Max SC Current rating with Circuit Breaker (A)@ Voltage (V)	Max. Class J or CC Fuse Ampacity (A) for 100,000 A SC rating
LR9D01	15	5,000 @ 480	1
LR9D02	15	5,000 @ 480	6
LR9D08	30	5,000 @ 480	25
LR9D32	70	65,000 @ 480	80

/ds

